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10/810,079	03/26/2004	Yuki Moritani	9683/181	3522
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Tadashi Horie		EXAMINER		
Brinks Hofer Gilson & Lione		FAROUL, FARAH		
P.O. Box 10395				
Chicago, IL 60610		ART UNIT PAPER NUMBER		
		2616		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/810,079

Applicant(s)

MORITANI ET AL.

Examiner

Farah Faroul

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 08/30/2004.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. The following Office Action is based on Application 10/810,079 filed on March 26, 2004, claiming foreign priority from a Japanese application, filed on March 28, 2003, having claims 1-10 and figures 1-48.

2. This application is in condition for allowance except for the following formal matters:

#### ***Specification***

a) The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

#### ***Claim Objections***

b) Claims 1-10 are objected to because of the following informalities:

Claim 1 recites the limitations: "which can make a copy" in line 6, "can distribute" in line 7, "which can distribute" in line 13 and "which can distribute" in lines 18-19. The limitations render the claim vague. It is advised that applicant remove the word "can" to make the claim affirmative.

Claim 5 recites the limitations: "which can make a copy" in line 6, "can distribute" in line 7, "which can distribute" in line 13 and "which can distribute" in lines 18-19. The limitations render the claim vague. It is advised that applicant remove the word "can" to make the claim affirmative.

Claim 1 recites the limitation "the terminal" in lines 28, 30-31 and 37. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "the mobile terminal".

Claim 1 recites the limitation "the new multicast router" in line 65. There is no antecedent basis for this limitation in the claim. Applicant needs to either amend this limitation to "a new multicast router" or amend the claim to recite "a first multicast router" and "a second multicast router".

Claim 1 recites the limitation "the previous multicast router" in lines 67-68. There is no antecedent basis for this limitation in the claim. The limitation renders the claim vague and indefinite. Applicant needs to specify whether she/she is referring to a first multicast router or a second multicast router.

Claim 3 recites the limitation "a multicast bases" in line 3. The word "bases" seems to be a misspelling of the word "basis". Appropriate correction is required.

Claim 3 recites the limitation "the terminal" in lines 8 and 23. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "the mobile terminal".

Claim 3 recites the limitation "the new multicast router" in line 47. There is no antecedent basis for this limitation in the claim. Applicant needs to either amend this limitation to "a new multicast router" or amend the claim to recite "a first multicast router" and "a second multicast router".

Claim 3 recites the limitation "the previous multicast router" in lines 49-50. There is no antecedent basis for this limitation in the claim. The limitation renders the claim

vague and indefinite. Applicant needs to specify whether she/she is referring to a first multicast router or a second multicast router.

Claim 4 recites the limitation "a multicast bases" in lines 3-4. The word "bases" seems to be a misspelling of the word "basis". Appropriate correction is required.

Claim 4 recites the limitation "the new multicast router" in line 41. There is no antecedent basis for this limitation in the claim. Applicant needs to either amend this limitation to "a new multicast router" or amend the claim to recite "a first multicast router" and "a second multicast router".

Claim 4 recites the limitation "the previous multicast router" in lines 43-44. There is no antecedent basis for this limitation in the claim. The limitation renders the claim vague and indefinite. Applicant needs to specify whether she/she is referring to a first multicast router or a second multicast router.

Claim 5 recites the limitation "the router" in line 10. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "the multicast router".

Claim 5 recites the limitation "the new multicast router" in line 67. There is no antecedent basis for this limitation in the claim. Applicant needs to either amend this limitation to "a new multicast router" or amend the claim to recite "a first multicast router" and "a second multicast router".

Claim 5 recites the limitation "the previous multicast router" in lines 71-72. There is no antecedent basis for this limitation in the claim. The limitation renders the claim

vague and indefinite. Applicant needs to specify whether she/she is referring to a first multicast router or a second multicast router.

Claim 6 recites the limitation "a radio base station" in line 11. Applicant has already cited "a radio base station" in claim 5, line 17. If the "radio base station" in claim 6 is different from the "radio base station" in claim 5, applicant needs to make it clear by either referring to "a second base station".

Claim 6 recites the limitation "the radio base station" in line 12. Application has mentioned two different "radio base station" in claims 5-6. Thus, it is not clear which radio base station is being referred to. Appropriate correction is required.

Claim 6 recites the limitation "the connected radio base station" in lines 20-21 and 31-32. There is no antecedent basis for this limitation in the claim. Applicant has mentioned multiple base stations being connected. Applicant needs to clarify the limitation.

Claim 6 recites the limitation "the detected multicast router" in lines 26-28. There is no antecedent basis for this limitation in the claim. Applicant has mentioned multiple multicast routers. Applicant needs to clarify the limitation.

Claim 6 recites the limitation "the threshold" in lines 32-33. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "the predetermined threshold".

Claim 6 recites the limitation " the recording" in line 33. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "the recording means".

Claim 6 recites the limitation "the multicast routers" in line 33. This limitation is not clear because applicant sometimes refer to "a multicast router" and "the multicast routers". Applicant needs to make it clear how many multicast routers are being claimed.

Claim 7 recites the limitation "the terminal" in line 23. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "the mobile terminal".

Claim 7 recites the limitation "a multicast bases" in line 3. The word "bases" seems to be a misspelling of the word "basis". Appropriate correction is required.

Claim 7 recites the limitation "the new multicast router" in line 47. There is no antecedent basis for this limitation in the claim. Applicant needs to either amend this limitation to "a new multicast router" or amend the claim to recite "a first multicast router" and "a second multicast router".

Claim 7 recites the limitation "the previous multicast router" in lines 51-52. There is no antecedent basis for this limitation in the claim. The limitation renders the claim vague and indefinite. Applicant needs to specify whether she/she is referring to a first multicast router or a second multicast router.

Claim 8 recites the limitation "a radio base station" in line 10. Applicant has already cited "a radio base station" in claim 7, lines 4-5. If the "radio base station" in claim 8 is different from the "radio base station" in claim 7, applicant needs to make it clear by either referring to "a second base station".

Claim 8 recites the limitation "the radio base station" in line 11. Application has mentioned two different "radio base station" in claims 7-8. Thus, it is not clear which radio base station is being referred to. Appropriate correction is required.

Claim 8 recites the limitation " the presence of multicast routers" in lines 8-9. This limitation is not clear because applicant sometimes refer to "a multicast router" and "the multicast routers". Applicant needs to make it clear how many multicast routers are being claimed.

Claim 8 recites the limitation "the connected radio base station" in lines 18-19 and 29-30. There is no antecedent basis for this limitation in the claim. Applicant has mentioned multiple base stations being connected. Applicant needs to clarify the limitation.

Claim 8 recites the limitation "the detected multicast router" in lines 24-25. There is no antecedent basis for this limitation in the claim. Applicant has mentioned multiple multicast routers. Applicant needs to clarify the limitation.

Claim 8 recites the limitation "the connected multicast router" in line 34. There is no antecedent basis for this limitation in the claim. Applicant has mentioned multiple multicast routers. Applicant needs to clarify the limitation.

Claim 8 recites the limitation "the threshold" in lines 30-31. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "the predetermined threshold".



Claim 8 recites the limitation "the recording" in line 31. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "the recording means".

Claim 9 recites the limitation "a multicast bases" in lines 3-4. The word "bases" seems to be a misspelling of the word "basis". Appropriate correction is required.

Claim 9 recites the limitation "the new multicast router" in line 41. There is no antecedent basis for this limitation in the claim. Applicant needs to either amend this limitation to "a new multicast router" or amend the claim to recite "a first multicast router" and "a second multicast router".

Claim 9 recites the limitation "the previous multicast router" in lines 43-44 and 46-47. There is no antecedent basis for this limitation in the claim. The limitation renders the claim vague and indefinite. Applicant needs to specify whether she/she is referring to a first multicast router or a second multicast router.

Claim 10 recites the limitation "the presence of multicast routers" in lines 10-11. This limitation is not clear because applicant sometimes refer to "a multicast router" and "the multicast routers". Applicant needs to make it clear how many multicast routers are being claimed.

Claim 10 recites the limitation "a radio base station" in line 12. Applicant has already cited "a radio base station" in claim 9, line 5. If the "radio base station" in claim 10 is different from the "radio base station" in claim 9, applicant needs to make it clear by either referring to "a second base station".

Claim 10 recites the limitation "the radio base station" in line 13. Application has mentioned two different "radio base station" in claims 9-10. Thus, it is not clear which radio base station is being referred to. Appropriate correction is required.

Claim 10 recites the limitation "the threshold" in line 35. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "the predetermined threshold".

Claim 10 recites the limitation " the recording" in line 35-36. There is insufficient antecedent basis for this limitation in the claim. The limitation should be changed to "the recording means".

Claim 10 recites the limitation "the presence of a multicast router" in line 24. This limitation is not clear because applicant sometimes refer to "a multicast router" and "the multicast routers". Applicant needs to make it clear how many multicast routers are being claimed.

Claim 10 recites the limitation "the multicast routers" in lines 39-40. This limitation is not clear because applicant sometimes refer to "a multicast router" and "the multicast routers". Applicant needs to make it clear how many multicast routers are being claimed.

Claim 10 recites the limitation "the connected radio base station" in lines 22 and 34. There is no antecedent basis for this limitation in the claim. Applicant has mentioned multiple base stations being connected. Applicant needs to clarify the limitation.

Claim 10 recites the limitation "the detected multicast router" in lines 27-28.

There is no antecedent basis for this limitation in the claim. Applicant has mentioned multiple multicast routers. Applicant needs to clarify the limitation.

Claim 10 recites the limitation "the connected multicast router" in line 38. There is no antecedent basis for this limitation in the claim. Applicant has mentioned multiple multicast routers. Applicant needs to clarify the limitation.

***Allowable Subject Matter***

c) Claims 1-10 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

For claims 1-2, the prior art fails to teach a combination of:

Transmission control means which transmits a first instruction signal for instructing the establishment request transmission means to transmit the path establishing request and a second instruction signal for instructing for instructing the withdrawal request transmission means to transmit the withdrawal request, depending on the detection by the station switching detection means, wherein:

When the station switching detection means detects the switching of the radio base station but the router switching detection means does not detect the switching of the multicast router, the transmission control means sequentially outputs the first

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instruction signal, the second instruction signal, and the first instruction signal again;  
and

When the station switching detection means detects the switching of the radio base station and the router switching detection means detects the switching of the multicast router, the transmission control means outputs the first instruction signal to transmit the path establishing request to the new multicast router and thereafter outputs the second instruction signal to transmit the withdrawal request to the previous multicast router

For claim 3, the prior art fails to teach a combination of:

Transmission control means which transmits a first instruction signal for instructing the establishment request transmission means to transmit the path establishing request and a second instruction signal for instructing the withdrawal request transmission means to transmit the withdrawal request, depending on the detection by the station switching detection means, wherein:

When the station switching detection means detects the switching of the radio base station but the router switching detection means does not detect the switching of the multicast router, the transmission control means sequentially outputs the first instruction signal, the second instruction signal, and the first instruction signal again;  
and

When the station switching detection means detects the switching of the radio base station and the router switching detection means detects the switching of the multicast router, the transmission control means outputs the first instruction signal to

transmit the path establishing request to the new multicast router and thereafter outputs the second instruction signal to transmit the withdrawal request to the previous multicast router

For claim 4, the prior art fails to teach a combination of:

A first updating step at which, when the station switching detection means detects the switching of the radio base station but the router switching detection means does not detect the switching of the multicast router, establishment request transmission means of the mobile terminal transmits a path establishing request for requesting the data link layer switch to establish a path for distributing an information signal to the radio base station connected to the mobile terminal itself, at which withdrawal request transmission means of the mobile terminal successively transmits a withdrawal request for requesting the multicast router to withdraw from the multicast group to which the mobile terminal itself belongs, and at which the establishment request transmission means transmits the path establishing request; and

A second updating step at which, when the station switching detection means detects the switching of the radio base station and the router switching detection means detects the switching of the multicast router, the establishment request means transmits the path establishing request to the new multicast router, and the withdrawal request transmission means transmits the withdrawal request to the previous multicast router

For claims 5-6, the prior art fails to teach a combination of:

Transmission control means which transmits a first instruction signal for instructing the establishment request transmission means to transmit the path

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establishing request and a second instruction signal for instructing for instructing the withdrawal request transmission means to transmit the withdrawal request, depending on the detection by the station switching detection means, wherein:

When the station switching detection means detects the switching of the radio base station but the router switching detection means does not detect the switching of the multicast router, the transmission control means sequentially outputs the first instruction signal, the second instruction signal, and the first instruction signal again; and

When the station switching detection means detects the switching of the radio base station and the router switching detection means detects the switching of the multicast router, the transmission control means outputs the first instruction signal to transmit the path establishing request to the new multicast router and thereafter outputs the second instruction signal to transmit the withdrawal request to the previous multicast router

For claims 7-8, the prior art fails to teach a combination of:

Transmission control means which transmits a first instruction signal for instructing the establishment request transmission means to transmit the path establishing request and a second instruction signal for instructing for instructing the withdrawal request transmission means to transmit the withdrawal request, depending on the detection by the station switching detection means, wherein:

When the station switching detection means detects the switching of the radio base station but the router switching detection means does not detect the switching of

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the multicast router, the transmission control means sequentially outputs the first instruction signal, the second instruction signal, and the first instruction signal again; and

When the station switching detection means detects the switching of the radio base station and the router switching detection means detects the switching of the multicast router, the transmission control means outputs the first instruction signal to transmit the path establishing request to the new multicast router and thereafter outputs the second instruction signal to transmit the withdrawal request to the previous multicast router

For claims 9-10, the prior art fails to teach a combination of:

A third updating step at which, when the station switching detection means detects the switching of the radio base station but the router switching detection means does not detect the switching of the multicast router, establishment request transmission means of the mobile terminal transmits a path establishing request for requesting the data link layer switch to establish a path for distributing an information signal to the radio base station connected to the mobile terminal itself, at which withdrawal request transmission means of the mobile terminal successively transmits a withdrawal request for requesting the multicast router to withdraw from the multicast group to which the mobile terminal itself belongs, and at which the establishment request transmission means transmits the path establishing request; and

A fourth updating step at which, when the station switching detection means detects the switching of the radio base station and the router switching detection means

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detects the switching of the multicast router, the establishment request means transmits the path establishing request to the new multicast router at which the withdrawal request transmission means successively transmits the withdrawal request to the previous multicast router, and at which the establishment request transmission means further transmits the path establishing request to the previous multicast router thereafter

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm'r Pat. 1935).

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tonjes et al. (US 2006/0268873 A1), Ekl et al. (US 2003/0083087 A1), Choi et al. (US 2003/0227907 A1) and Kumaki et al. (US 2002/0191562 A1) are cited to show systems pertinent to applicant's invention.

Kumaki et al. (US 2002/0191562 A1) discloses a router device for realizing handoff in mobile terminals. Tonjes discloses a group hopping and channel zapping during transmission of multicast applications. Ekl discloses systems and methods for implementing calls using pre-established multicast groups in a multicast IP network. Choi discloses an apparatus for providing QoS of VoIP traffic on IP router and forwarding method.



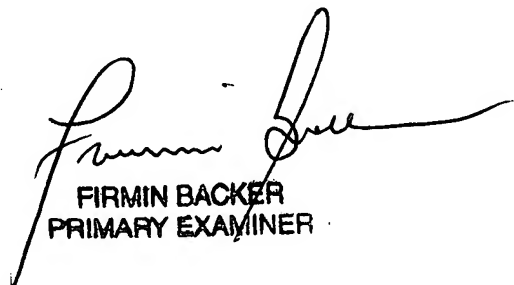
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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farah Faroul whose telephone number is 571-270-1421. The examiner can normally be reached on Monday - Friday 6:30 AM - 4 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

F. Faroul



FIRMIN BACKER  
PRIMARY EXAMINER